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Journal Abstract

The alteration of the urinary steroid profile under the stress A Gronowska, D Kwiatkowska, A Pokrywka, M Koteras, E Turek-Lepa, M Szutowski Biol Sport 2010; 27 (1):

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In the second part of twentieth century anabolic-androgenic steroids were introduced into doping practice and received continuously increasing significance. In order to prove the usage of doping substances, the determination of steroid profile in the urine came into practice. Several factors may be responsible for alterations in the normal steroid profile for example age, sex and diet. The aim of this study was to find out, whether the psychological stress may cause modifications in the steroid profile and T/Et ratio. The effect of physical activity was also considered. The steroid profile was determined in the group of 34 students being in non-stress conditions and under stress immediately before an important university exam. The intensity of stress was rated by self-reported questionnaire. The GC/MS method was applied to determine the steroid profile in the urine samples. The results of the experiment have shown that psychological stress may cause significant changes in the steroid profile, especially in females. Physical activity, independently of stress significantly modified the steroid profile. In summary, observed changes in steroid profile suggest, that major fluctuations of T/Et and A/E ratios under the influence of stressogenic factors and physical activity are unlikely.

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